

XXIII.—Notes on the Birds of North-East Chihli, in North China. By J. D. D. LA TOUCHE, C.M.Z.S., M.B.O.U.

A FAIRLY full description of the port of Chinwangtao, in north-east Chihli, China, where the bulk of the following notes were written, having already appeared in 'The Ibis' (1914, p. 560), it is unnecessary to revert to the subject, except to mention that, since that time, Chinwangtao has been extensively planted with acacias. These trees having formed thick woods, impenetrable in summer and autumn, the observation of new arrivals is now more difficult than when the sandhills were bare. The only clear ground at present is along the cliffs above the beach. The planting of trees had not induced birds to nest when I left Chinwangtao, probably on account of the want of water. In time, however, the trees should cause permanent dampness and the formation of pools in certain parts, and this should induce birds to linger and eventually breed there.

A visit to the mountains north of Chinwangtao in the autumn of 1916, enabled me to ascertain that they are covered in certain parts with new woods; but large timber is practically non-existent, and the scarcity of birds at the time of my visit was very marked. *Corvus leucillanti*, Magpies (only too abundant), *Urocissa erythrorhyncha*, Jays and Choughs, a few common Tits, *Pterorhinus davidi*, *Rhopophilus pekinensis*, *Emberiza leucocephala*, *E. cioides*, some Green and Spotted Woodpeckers, a few Hawks and Pheasants, and Chukore were almost the only birds noticed. Further to the west and north-west, towards the Tungling and the Imperial Hunting park, where the country has unfortunately been handed over to a Vandal peasantry, the few remaining forests shelter many interesting species. It will not be long, however, before the last of these accessible forests disappears and takes away with it the fauna that even now is on the verge of extinction.

I am greatly indebted to Mr. A. de C. Sowerby, late of Tientsin, and to the Rev. Geo. D. Wilder, of the American Board of Missions, Peking, for important and

invaluable information on Chihli birds and for the loan or gift of specimens; to Father Scherjon, of the Dutch Lazarist Mission, for his kind assistance in procuring me specimens from the Chien An district (about fifty miles as the crow flies to the west-north-west of Chinwangtao) through a native hunter; and to Fathers Schmid and Dekkers, of the same mission, for information regarding the geography of the interior, for their kind hospitality, and for the loan of their residence on two occasions. My best thanks are also due to Mr. W. R. Ogilvie-Grant, late of the Natural History Museum, and to Dr. E. Hartert for kindly identifying a number of specimens for me, and to Lord Rothschild for the use of the collections at Tring.

In the following notes, which are a summary of those made at Chinwangtao from November 1910 to October 1917, I have as a rule restricted references to David and Oustalet's 'Oiseaux de la Chine' and to my previous paper on this part of China.

1. *Corvus corone orientalis* Eversmann.

Corvus corone David & Oustalet, Les Oiseaux de la Chine, p. 368: La Touche, Ibis, 1892, p. 429; Bull. B. O. C. vol. xxix. p. 132.

Corvus orientalis La Touche, Ibis, 1914, p. 566.

The first Chinese examples of the eastern Carrion Crow were taken at Foochow in 1884, previous to which date the bird had been found by Swinhoe at Naochow Islands, near Hainan, but had not been obtained there or elsewhere in China, unless the specimen recorded by Père Courtois as shot in Kiangsu by Père Heude and preserved in the Sikawei Museum be of anterior date (Ibis, 1907, p. 510). One example was taken at Shaweishan on the 23rd of March, 1911, by the collectors sent there by me on behalf of the Migration Committee of the British Ornithologists' Club. This Crow is a regular migrant at Chinwangtao in late autumn. It also passes in the early spring, and I have occasionally seen individuals in winter which were undoubtedly of this species. It is quite evident that a fair number pass

down the coast to winter in the maritime provinces of China; but, beyond Père David's statement that he had seen Crows on the western borders of China which he thought were Carrion Crows and the record of two examples obtained in west Szechuan by the late Mr. W. R. Zappey (Mem. Mus. Comp. Zool. Harvard College, vol xl. no. 4, 1912, p. 197), nothing seems to be known of the movements of the bird in the interior. At Chinwangtao the birds may be seen migrating in small parties, and flying in scattered order from east to west, during late October and in November.

The wing in three male examples shot at Chinwangtao measures 13·60, 14·00, and 14·50 in., and in one female 13·20 in. A male and a female, apparently young birds, shot on migration on the 2nd of November, 1916, have wing-measurements of 12·70 and 12·30 in. respectively.

2. *Corvus macrorhynchus levaillanti* Less.

Corvus sinensis D. & O. p. 367.

Corvus levaillanti La T. p. 566.

The Chinese Jungle-Crow is a somewhat rare migrant at Chinwangtao. It appears to be common enough as a resident in the mountains north of the port, where I saw two or three pairs established in the vicinity of the hamlet where I was staying in October 1916. Each pair had a valley to itself.

Two eggs taken about the 9th of May, 1917, in the above-mentioned locality, measure $1\cdot75 \times 1\cdot18$ and $1\cdot70 \times 1\cdot18$ in. The ground-colour is pale greenish blue and the markings are somewhat scanty. A live nestling obtained from the same mountains on the 15th of July, 1917, had the mouth coloured bright crimson and the irides blue. When the bird became full-grown these parts changed to the normal colour of the adult.

3. *Corvus frugilegus pastinator* Gould.

Frugilegus pastinator D. & O. p. 369.

Corvus pastinator La T. p. 567.

The Eastern Rook passes north-east Chihli from the end

of February and throughout March to the end of April, and again in immense flocks in October and November. Inland, nest-building begins at the beginning of April. A rookery, which at the beginning of May was fully inhabited, was found deserted on the following 19th of June. In 1914 the Rooks built at the port itself for the first time. The nests were begun about the 15th of April, and the last were mostly finished about the 6th of May. In 1915 the birds attempted to build on the 3rd of May, but the first nests being destroyed, they left and did not reappear. During the two following years, large rookeries were successfully established in two or three spots at the port.

4. *Corvus dauricus* Pallas.

Lycos dauricus D. & O. p. 370.

Corvus dauricus La T. p. 567.

The Daurian Jackdaw appears at Chinwangtao towards the end of February or beginning of March, and may be seen migrating throughout the latter month. It passes again in autumn with the Rooks in great numbers.

5. *Corvus neglectus* Schlegel.

Lycos neglectus D. & O. p. 370.

Corvus neglectus La T. p. 567.

Swinhoe's Jackdaw passes commonly from the middle of March until May, and apparently tarries occasionally till the end of that month, as a party of ten were observed on the 25th of May, 1913. This confirms Père David's observations. I do not know whether any breed in the district. In autumn this Jackdaw is seen mixed with the flocks of Daurian Jackdaws and Rooks. During both seasons it is much less common than the pied bird, but flocks entirely composed of Black Jackdaws are not at all unusual. Hybrids are common. The wing-measurements in my series of Jackdaws are as follows :—

<i>C. dauricus</i>	♂ 8·83 – 9·43, ♀ 8·45 – 9·00 in.
<i>C. neglectus</i>	♂ 8·71 – 8·93, ♀ 8·34 – 8·65
Hybrids	♂ 9·00 & 9·35, ♀ 8·50 – 8·85

6. *Fregilus graculus brachypus* Swinhoe.

Fregilus graculus var. *brachypus* Swinhoe, P. Z. S. 1871, p. 383.

Fregilus graculus D. & O. p. 371 (part).

Seven examples of the Short-toed Chough, obtained in the mountains near Chiuwangtao, measure as follows:—

Five males.

Wing	11.15-11.80 in.	Average	11.47 in.
Tarsus	1.75- 1.90	„	1.83
Middle toe without claw ..	.94- 1.15	„	1.02
Bill	1.90- 2.05	„	2.00

Two females.

Wing	10.05- 10.80 in.
Tarsus	1.65- 1.72
Middle toe without claw ..	.85- 1.00
Bill	1.85- 2.00

This bird is a common resident in the mountains of north-east Chihli. A pair seen on the 2nd of May had probably a nest with young. Two eggs, taken by a native from a hole in the Great Wall about the middle of April 1917, were a good deal incubated. The ground-colour of these eggs is white, and this is marked all over with specks or irregular medium-sized spots of reddish brown over violet-grey spots, the latter on the surface as well as within the shell. There is a zone round the large end of the eggs. The shape is ovate. They measure 1.54×1.05 and 1.47×1.06 in.

7. *Nucifraga caryocatactes macrorhynchus* Brehm.

Nucifraga caryocatactes D. & O. p. 372.

Nucifraga leptorhynchus Sceböhm, Ibis, 1888, p. 236.

The Eastern Nutcracker inhabits Chihli, but is very rare according to Père David. Two undoubted migrants were shot in this vicinity in October 1911, one of which is in my collection. I have another specimen shot in the Chien An district in April 1912. This bird is a female in very pale (probably faded) plumage.

♂. Wing 7.30 in.; white on outer rectrix 1.30 in.

♀. Wing 6.90 in. (worn); white on outer rectrix 0.90 in.

8. *Pica caudata sericea* Gould.

Pica caudata D. & O. p. 373.

Magpies are, as elsewhere in China, very abundant. In November they associate in large flocks, and probably many wander down to the south-west, as the birds which frequented the port at that season had the appearance of travelling birds.

I am unable to see any notable difference between the Magpies of this part of Chihli and those from Foochow in south-east China, except that there is perhaps a little more white on the primaries on average in the northern birds.

Early in March 1917 a large party of Magpies appeared at the port and remained throughout the spring. One pair remained to breed. I received fresh eggs on the 11th of May from the mountains north of Chinwangtao.

9. *Cyanopica cyana interpositor* Hartert.

Cyanopolius cyanus D. & O. p. 374, pl. 84.

Cyanopica cyanus interposita Hartert, Nov. Zool. vol. xxiv. p. 493, Dec. 1917.

The north China Azure-winged Magpie appears to be common in the Chien An district, from which locality I have several examples. It is abundant in the plain round Peking, but I have only seen one specimen from the Chinwangtao country, which was shot at the beginning of June 1917, about 30 miles north of that port.

Specimens from Chien An differ from the Lower Yangtse birds in having the back lilac-grey, wing 5.85 in. Those from the latter locality have the back sandy lilac, wing 5.55 in.

10. *Urocissa erythrorhyncha* (Gm.).

Urocissa sinensis D & O. p. 375, pl. 83.

The Chinese Blue Magpie is common in copses and woods in the hilly parts of north-east Chihli.

A clutch of four eggs brought to me from the hills on the 29th of May, 1917, was fresh, two of four and five eggs respectively received on the 15th of June were nearly fresh, and others received on the 25th of June and three eggs on the 2nd of July were hard-sat, half incubated, or fresh.

These eggs are nearly all very heavily marked ; many are globular ovate or about oval, while others are elongated ovate. Green eggs are rather rare, most of the eggs having a clayey-brown ground-colour ; but two green eggs obtained on the 25th of June are miniature dark Magpie's eggs.

11. *Garrulus glandarius diaphorus* La Touche.

Garrulus diaphorus La Touche, Bull. B. O. C. vol. xxxv. 1915, p. 98. .

The Chihli Jay differs from *Garrulus brandti* of Manchuria in being on average more lightly streaked on the crown, in having the sides of the head unspotted, the lores generally unmarked, and the back often much suffused with vinous. The under parts are more washed with rufous than in the Manchurian Jay, only the innermost secondary is marked with chestnut, and the bill is distinctly smaller. The most striking difference, however, is in the edging of the primaries. This is complete in the Manchurian Jay, but in the Chihli bird the base of the primaries showing beyond the coverts, beginning from the 3rd, 4th, or 5th primary, is black, the innermost primaries being spotted with blue. A black patch is thus formed, just under and beyond the speculum of the secondaries, which is of variable extent, the edging of the flight-feathers being often no more important than in the south China Jay (*G. sinensis*). Two adult females taken in a locality just beyond the Great Wall show very little difference from the ordinary *G. brandti*, the extent of black on the wing being very small and the back quite as pure grey as in that bird. Ten other specimens (nine skins and one live bird) from the mountains some twenty to forty miles north of Chinwangtao, and a skin from the Tung Ling forests, are more or less typical. There is no doubt that, as suggested by Mr. Bannerman in a footnote to my description of this Jay, the bird is a subspecies of *G. glandarius*, and it will doubtless be found to merge completely, in north-east Chihli, with *G. g. brandti*. In the same way it is to be expected that in south-west Chihli or on the borders of the north-west range of *G. sinensis* it will approximate very

closely to that species. Thus the Striped-headed Jay of Europe will be connected through these East-Asian Jays with the absolutely plain-crowned *G. bispecularis* of the Himalayas. The Chihli Jay has a strong tendency to a blue speculum on the secondaries, and even in Fohkien the southern bird has occasionally traces of black stripes on the crown. I have no specimens from western China, but I presume that, as I have written above, there will be found a blending of the north and of the south China birds somewhere in west China. Specimens from Hupeh, central China, are typical *G. sinensis*.

The following are the measurements of the twelve examples of the Chihli Jay in my collection:—Bill from nostril to tip of culmen 0·78 in.; wing: ♂ 7·13 in., ♀ 7·19 in.; total length: ♂ (5 ex.) 14·07 in., ♀ (2 ex.) 14·25 in.

The soft parts of a male shot on the 25th of October, 1916, were:—Iris pale silvery mauve; bill black; base of lower mandible bluish; legs greyish flesh. The soft parts of other adult specimens were similar, those of younger birds being somewhat duller.

The Chihli Jay is said to be abundant in the forests of the Tung Ling in north-east Chihli. It is not uncommon in the wooded mountains twenty to forty miles north of Chinwangtao, where it feeds a good deal on acorns, and nests in oak-trees. Two nest-linings, containing each three eggs, with a live bird snared in the latter locality, were brought to me on the 26th of May, 1917. One of the eggs is globular oval in shape, and the others are broadly oval or broad oval-ovate. The ground-colour is a clayey buff. This is freckled all over with pale brown, and a zone on the small end appears in one egg, while the others have this round the large end, or have a cap which is formed of a thick underlying freckling or mottling of reddish grey. Several eggs have the usual soluble dark brown hair-line. The largest egg measures 1·13 × 0·93 in., the smallest 1·08 × 0·93 in., and the six eggs average 1·11 × 0·93 in.

I kept the live bird until the following October, when I gave him to Sikawei. This bird was fed on Kaoliang, raw

beef, fruit, insects, etc. Acorns given to it were stored in various parts of the cage for future use.

12. *Parus major minor* T. & S.

Parus minor D. & O. p. 278.

The Lesser Tit is common in inland wooded localities. Several nests with eggs were brought to me from the mountains in the vicinity on the 16th and 23rd of May (fresh), 15th of June (hard-sat), and 2nd of July (fresh).

13. *Parus ater insularis* Hellmayr.

Parus ater insularis Hellmayr, Orn. Jahrb. 1902, p. 36.

Parus insularis La T. p. 567.

A number of specimens of this bright-coloured Coal Tit were obtained near Chinwangtao in autumn and winter, 1911. I shot a single example on the 21st of April, 1912, in an old graveyard close to the sea, a few miles off, and that same morning I picked up in a neighbouring field the feathers of another which had been killed. Both were evidently migrants. I did not meet with any other travellers until the 17th of October, 1914, when one appeared on the trees outside my office at the Custom House, and the day after I shot a bird in the small willows behind the Custom House, which was probably that seen the day before. It would thus appear that this Coal Tit travels down the coast, at least occasionally. Mr. Ogilvie-Grant has informed me that the British Museum has examples from North China etc.

The wing in six males varies from 2.28 to 2.40 in., and in four females from 2.15 to 2.30 in.

The Coal Tit found in the west of Chihli is *P. pekinensis*, which occurs in north-west Fohkien and on the borders of Tibet and south-west China.

14. *Parus palustris hellmayri* Bianchi.

Parus palustris D. & O. p. 288.

Parus palustris hellmayri Bianchi.

The Marsh Tit is common in the interior to within a few miles of the port. It is a resident.

A nest found by me on the 23rd of April, 1913, was placed in a hole of a willow just under the railway embankment and close to a station. It was then being built. On the 4th of May following I returned with the collector Wangwang and found the bird sitting. The nest-hole had a very narrow opening ($1\frac{1}{2}$ in. wide) about two feet from the ground. Wangwang lifted the bird off her nest with a bent wire, and after identifying her we released her. There were eight eggs, nearly fresh. They are of a broad and pointed ovate shape, white, with small dots and spots of light red and reddish lilac, largest and most numerous towards the large end, where in most of the eggs they form a fairly well-marked zone. They measure 17×12.5 (three eggs), 17×12 , 16.5×13 , 16.5×12.5 (two eggs), and 16×12 mm.*

The Marsh Tit of this district is very similar to that taken at Chinkiang, the only difference being in the extent of black on the throat. This is large and unspotted in Chinkiang examples, while in the northern birds the lower portion is tipped with white. Wing in seven Chinwangtao birds 2.38 in., in six Chinkiang birds 2.31 in.

I found Marsh Tits to be quite common in a wood among the mountains of the Liautung Peninsula, which I visited in February 1890.

15. *Ægithalus caudatus* L.

The White-headed Long-tailed Tit is probably a resident in the wooded parts of this district. The collectors found it a few miles north of the port in November. Several specimens were secured, one of which was identified by Mr. Ogilvie-Grant as similar to European examples. This bird is not mentioned by Père David as occurring in China.

I found this Tit to be common in the mountains of the Liautung Peninsula in February.

* I am indebted to Messrs. Ogilvie-Grant and Rickett for the measurements and description of these eggs, which were sent to the British Museum in 1913, together with the collection made here that spring for the B. O. C. Migration Committee.

16. *Remiza pendulina consobrina* Swinhoe.

Ægithalus consobrinus D. & O. p. 294.

The Chinese Penduline Tit passes in spring and autumn, but is not common. Two examples were seen and obtained by the collectors—one on the 25th of October, 1911, and another on the 13th of May, 1913. On the 5th of October, 1915, a flock of these birds appeared at the port and remained about the bluff for two or three days. A rather strong south-west wind was blowing during that time. On the weather becoming calm again, the birds disappeared. On the 16th of October, 1916, I again saw a party at the port. This Tit winters on the Yangtse.

I shot several examples of this bird among stacked reeds on the reed-beds near Newchwang during the spring of 1890. Bearded Tits (*Panurus ruscicus* Brehm) were also found there at the same time, but these were much less numerous.

17. *Suthora webbiana mantschurica* Hartert.

Suthora webbiana mantschurica Hartert, Vög. Pal. Fauna, p. 410.

The Manchurian Crow-Tit is apparently not uncommon in the mountains of north-east Chihli. I have a pair from Shanhaikuan, two examples from the mountains north of the port, and several from Chien An. It differs very markedly from *Suthora webbiana* of the Lower Yangtse and from *Suthora w. suffusa* from north-west Fohkien, being very grey above and rosy on the under parts: ♂, wing 2.08, tail 2.76 in.; ♀, wing 1.95, tail 2.76 in. The bird which is found at Peking appears to be quite different. I have an example, given to me by Mr. Styau, who labelled it *S. longicauda*. This example has sandy-brown flanks and is much less rosy-coloured, while it has a much longer tail than the birds from north-east Chihli. Wing 2.15 in., tail 2.90 in.

I obtained two specimens of the Manchurian Crow-Tit in February 1890 in the mountains of the Liautung Peninsula.

18. *Pterorhinus davidi* Swinhoe.

Pterorhinus davidi D. & O. p. 187, pl. 50.

David's Babbler is a common resident among the mountains north of Chinwangtao. I have a live example, purchased from a native in October 1916, which was reared from the nest and is exceedingly tame. Besides this individual, I had at Chinwangtao three nestlings which I reared myself, and a wild-caught adult. One of the former developed fits and died during the summer, and the latter only lived for a few weeks, dying suddenly towards the end of that season. The two surviving youngsters, however, were thriving when I took them down to Shanghai in the autumn and gave them to a friend. I have never seen the birds wild in their native mountains, but judging from those I have had in captivity, they appear to possess much the same characteristics as the other Hwamei of south China. They are noisy, musical, more or less omnivorous in their diet, combative, and easily tamed. They appear to stand captivity well, and are quite content with the small cages Chinese confine their birds in. The bird purchased by me in the autumn of 1916 is so tame that it will allow itself to be handled without any fear. On being taken notice of, it will puff out its feathers, chattering continuously and elevating its tail above its back, and will eventually sidle up to the hand introduced into its cage; and on being taken up, it will stay there as if hypnotized, making no effort to escape and remaining absolutely quiescent. I have, while the bird was in that condition, cut its claws and bill without its moving. When deposited thus in any place, it will keep in the same position for some time before moving away. This Babbler has a great variety of musical calls, which it will repeat *ad infinitum*, but as a rule without varying the calls. The most usual ones which I have noticed can be syllabled as follows:—"Pi-yo-yo," "dz-re quick-quick," "coo-yew, coo-yew," "tew-whee, tew-whee," "tew chew-chew, chew-chew." During the summer I have heard it sing a low warbling song, which I found it would repeat if I excited it by whistling or waving my hand near the cage. While singing, it swings

its head from side to side, puffing out its feathers and holding its tail high up over its back. The song is varied and uttered in consecutive trills with very short intervals between each trill, and while warbled in a very low tone is most harmonious. This bird has been deposited in the Zoological Gardens at Regent's Park.

The young birds reared were very noisy, and continually uttered some of the musical calls of the adult. I fed them on bread and milk, green-bean paste, and chopped raw beef. I fed the adults on the same food with grain of all kinds added. Insects of any kind are also much appreciated. The birds when given grain scatter it at once on the floor of the cage, where they prefer to pick at it rather than take it from the grain-cups.

The soft parts of this bird are:—Iris brown; bill bright yellow, with culmen and point of both mandibles dull yellowish green; legs dark reddish grey.

A number of nests with eggs were brought to me from the mountains during the spring and early summer of 1917 on the following dates:—

- 11th May, two nests with one and three eggs (fresh).
- 15th „ one nest with three eggs (fresh).
- 16th „ three nests with two, three, three eggs (fresh).
- 29th „ one nest with four eggs (incubated).

The eggs are plain turquoise-blue. The texture is smooth and satiny, with a slight gloss. The shape varies from pure ovate to nearly oval, but the former shape is the most usual. Nineteen eggs average 1.02×0.77 in. The largest are 1.08×0.75 in. and 1.07×0.79 in.; the smallest 0.94×0.74 in. and 0.95×0.73 in.

The nest, placed in bushes, is a shallow cup made of dried grass blades and grass stems, and is lined with very fine rootlets or grass stems. Five nests average: inner diameter about $3\frac{1}{3}$ in., inner depth about $1\frac{1}{2}$ in.

19. *Larvivora cyane* (Pallas).

Larvivora cyane D. & O. p. 238, pl. 27; La T. p. 571.

Pallas's Blue Robin is very abundant on migration.

It passes through this district from about the 10th to the 30th of May and also in the beginning of autumn. My earliest record at that season is the 23rd of August, 1911, and my latest the 28th of September, 1915.

Old females have the rump, upper tail-coverts, and tail dull blue.

This bird was abundant at Newchang in May 1889. It is said to be common about Peking on migration. It is rare at Chinkiang on the Lower Yangtse and is quite unknown in Fohkien. On the other hand, it is common in spring and autumn at Shaweishan at the mouth of the Yangtse. Its migration route is therefore down the Yangtse to the sea, whence it crosses over to Japan and up the coast, and also probably through northern China to its breeding-quarters. It apparently returns by a similar route, avoiding south-east China.

20. *Larvivora sibilans* Swinhoe.

Larvivora sibilans D. & O. p. 239.

I shot an adult male of Swinhoe's Robin at the port on the 19th of May, 1916. The bird was running among some outhouses near a vegetable garden, shivering its tail like Pallas's Blue Robin, the female of which it resembles somewhat when seen from a distance. It can be distinguished, however, by its squamated breast, more rufous upper parts, and red tail. This is, I believe, the first example procured in north China. Its presence was doubtless due to the then prevailing easterly winds. The bird winters in Kwantung Province, passes through north-west Fohkien and the Lower Yangtse, is abundant at Shaweishan, and has been taken in Corea. It summers in Saghalien Island.

21. *Zosterops erythropleura* Swinhoe.

Zosterops erythropleura D. & O. p. 85, pl. 12.

The Red-flanked White-eye appears to pass regularly in autumn through the district. During passage, birds tarry for a short time at the port. I noticed it there on the following dates:—The 26th and 27th of September, 1912;

the 29th of September and the 2nd of October, 1914; and the 18th of September, 1915. I have seen this species only once in spring, on the 30th of May, 1916. Contrary to their usual custom, the birds composing the flock seen on this occasion were quite silent.

This White-eye is common at Peking, and I also obtained it at Newchang in August 1889. It is quite unknown on the Lower Yangtse.

22. *Sitta europæa amurensis* Swinhoe.

Sitta amurensis, D. & O. p. 90.

I have a single example of the Amoor Nuthatch, shot in December 1914, in the mountains near Shānhaikuan. Two others had been previously seen by my collector in the same locality. This Nuthatch appears to be very rare in Chihli. The example procured is a male. Culmen 0.58 in., wing 3.10 in.

I found the Amoor Nuthatch to be quite common in a wood in the mountains of the Liautung Peninsula in February 1890.

23. *Sitta canadensis villosa* Verreaux.

Sitta villosa D. & O. p. 91, pl. 13.

The Chinese Grey Nuthatch is not uncommon in the Chien An district, but it appears to be rare in the vicinity of Chinwangtao. I have half-a-dozen examples from Chien An and one obtained near Shanhaikuan in the same wood where my single specimen of *S. amurensis* was taken.

24. *Certhia familiaris* L.

Certhia familiaris D. & O. p. 87.

The Tree-Creeper is not uncommon in certain wooded localities a few miles north of the port. I have also a single example from the Shanhaikuan Mountains. A specimen sent to Mr. Ogilvie-Grant was declared by him to be identical with Norwegian examples. The under parts in the Chihli birds are very white and the upper parts very grey. Père David states that he obtained three examples at the Ming Tombs near Peking.

I found the Tree-Creeper very abundant in the mountains of the Liautung Peninsula in February 1890. It frequented the trees near the villages and farms in the valleys as well as the woods.

25. *Tichodroma muraria* (L.).

Tichodroma muralis D. & O. p. 88.

The Wall-Creeper is found in winter on the cliffs bordering the Shih Ho or Shanhaikuan River. I have four examples, all in winter plumage. One of these, taken in December, has still a spot of black on the throat.

26. *Anorthura fumigata* (T. & S.).

Troglodytes fumigatus D. & O. p. 225.

Anorthura fumigata La T. p. 567.

The Chinese Wren is by no means an uncommon migrant in this vicinity. I have two specimens shot at the port on the 26th of March and 10th of April, 1911, and saw another on the cliffs on the 31st of March, 1913. I have also a number of examples obtained in autumn and winter. The earliest date on which I have seen this Wren in autumn is the 10th of October.

I have a very pale specimen, shot in November, which might be an example of *Olbiorchilus fumigatus idius* Richmond (Eliot Blackwelder, Carnegie Inst. Wash. Publ. No. 54: 'Research in China,' vol. i. pt. ii. pp. 481-508), as the under parts are very white. Other individuals shot at the same season are hardly distinguishable from Lower Yangtse specimens. Some examples shot at Shaweishan on the autumn migration have the breast practically uniform. Others from the same locality bear traces of the barring. Birds from the Yangtse and all those from north-east Chihli have the throat and breast more or less barred.

27. *Regulus cristatus japonensis* Blakiston.

Regulus japonicus D. & O. p. 276; La Touche, Bulletin B. O. C. vol. xxix. p. 139 (1912).

The Japanese Goldercrest is apparently a very common

migrant on the China coast in April and in October and November. Several examples were seen or shot on the 27th of October, and on the 4th, 13th, 17th, and 18th of November, 1913, by the Foochow collectors, and I have one from Shanhaikuan, dated the 2nd of February, 1917.

I shot a female of this Golderest in the mountains of the Liautung Peninsula in February 1890.

28. *Locustella certhiola* (Pallas).

Locustella certhiola D. & O. p. 248; La T. p. 567.

Pallas's Grasshopper-Warbler is very abundant on passage. It appears from the end of May until the middle of June, but so far I have no evidence of its breeding in north-east Chihli. The autumn passage begins early in the last week of August, and the migrants are about until the end of September. My earliest and latest records at this season are the 22nd and 24th of August and the 28th of September. The birds in spring are all in summer dress with white throat, breast, and abdomen, and unspotted breast (♂). In autumn, nearly all those shot are in winter or in the young plumage (rich buff under parts). In this Grasshopper-Warbler the feathers of the crown are edged with grey, in *strong* contrast with those of the back, which are olive-brown centred on the mantle with black. I have one example, shot at Foochow on the 6th of June, which has the crown-feathers coloured like those of the rest of the upper parts, the whole upper colouring appearing very pale. Thinking the bird was new, I sent it to the British Museum, where Mr. Ogilvie-Grant determined it as merely *L. certhiola*. A similar specimen would seem to have been obtained in Manchuria by Mr. C. Ingram's collectors.

29. *Locustella lanceolata* (Temm.).

Locustella lanceolata D. & O. p. 251; La T. p. 568.

The Streaked Grasshopper-Warbler is very abundant in spring from about the middle of May to the beginning of June, and in autumn from the last ten days in August until well on into October, the latest records I have for that

month being the 8th and 10th. There is great variation in the breast-markings. It probably sometimes stays a little later, as I saw on the 23rd of October, 1915, the remains of a bird which had been killed by a cat.

30. *Acrocephalus arundinaceus orientalis* (T. & S.).

Calamodyta orientalis D. & O. p. 252.

Acrocephalus orientalis La T. p. 568.

The Eastern Great Reed-Warbler is not a common migrant at Chinwangtao, where I have only seen a few towards the middle of May, on the 1st and 4th of June, and in autumn during August and September. It appears, however, to breed abundantly in the Hsieh Chia Ying marshes, where nests and eggs were brought to me at the end of June and beginning of July. These resemble those taken at Chinkiang (Ibis, 1906, p. 444).

The nests are made of weeds, grasses, and grass-down.

This Reed-Warbler was extremely common in the reed-beds near Newchwang during the summer of 1889.

31. *Acrocephalus agricola concinnens* Swinhoe.

Calamoherpe concinnens D. & O. p. 251.

The Paddy-field Reed-Warbler is evidently a rare migrant at Chinwangtao, as in seven years' collecting I obtained but one example, shot near Shaubaikuan on the 10th of June, 1914. Swinhoe found it breeding near Peking (*Calamoherpe concinnens*, P. Z. S. 1870, p. 432) in numbers. Père David states that it breeds everywhere in damp spots on the Great China Plain, so that it seems likely that it will eventually be found to breed in the north-east Chihli marshes.

The measurements of the skin mentioned above are as follows:—Culmen 11 mm.; wing 57 mm.; tail 60 mm.; tarsus 22 mm. Total length about 130 mm.

32. *Acrocephalus bistrigiceps* (Swinhoe).

Calamodyta maackii D. & O. p. 254.

Acrocephalus bistrigiceps La T. p. 568.

Von Schrenck's Reed-Warbler is by far the commonest of

the Reed-Warblers found in the vicinity. It appears in spring towards the 15th of May, and some remain until the middle of June. It is extremely abundant in the millet crops on the plain during August, and when the crops are cut, spreads to the grass-covered marshes, where it is abundant in October. The earliest date on which I have seen this bird on the autumn migration is the 7th of August, 1912, and the latest the 26th of October, 1914, and the 27th of October, 1912. At the end of August many young birds, probably bred in the vicinity, are about. They appear to moult before they leave for the south. The young bird is paler above than the adult, especially on the crown; the black eyebrow is less marked, the feathers being edged with fulvous brown; the wing-feathers are edged with paler brown, in strong contrast with their dark centres. I have occasionally heard birds singing at the port on the spring migration. The song is not loud but very melodious. This Warbler and the Black-naped Oriole are the only migrants heard singing at Chinwangtao.

33. *Acrocephalus tangorum* La Touche.

Acrocephalus tangorum La Touche, Bull. B. O. C. vol. xxxi. 1912, p. 10; Ibis, 1914, p. 568.

Description (autumn bird). Upper parts warm fulvous brown, more fulvous in young birds. A pale buff superciliary stripe, and above this a narrow and more or less blackish stripe. Throat and centre of abdomen silky white. Rest of under parts warm rufous buff. Wings and tail brown, edged exteriorly with the same fulvous brown as the back. Tail-feathers narrow and pointed. A male shot on the 5th of June has the upper parts less fulvous than autumn birds and its superciliary stripe is whitish, the dark band above it being more conspicuous than in the autumn birds. The soft parts of this bird were as follows:—Iris greyish hazel; upper mandible blackish; lower mandible flesh-colour; tongue bright yellow; rictus and mouth yellow; legs yellowish flesh-colour. One of the birds obtained in 1912

has the legs described on the label as plumbeous. Seventeen males and four females measure as follows :—

Culmen...	10·5–12	mm. ;	average, a little over 11 mm.
Wing.....	51–55·5	„ „	53 mm.
Tail	50–54·5	„ „	52 „
Tarsus ...	22	„	„

The 1st primary is minute as in *A. agricola*; the 2nd primary is equal to the 6th, or is intermediate between the 6th and 7th; the 3rd and 4th primaries are equal and longest.

This Reed-Warbler might at first glance be mistaken for *A. bistrigiceps*, but on closer examination it will be found to differ from that species in its wing formula, minute first primary, brighter colouring, large bill, and long and narrow rectrices. It is closely allied to *A. agricola*, from which it differs in its wing formula, brighter colouring, and dark stripe above the eye.

The North China Reed-Warbler is very common in the small millet-fields (*Panicum italicum*, *P. miliaceum*, and *P. crus-galli*) in the plains round Chinwangtao from about the 18th of August to early in the latter half of September. In spring I have only met with it on a few occasions, each time among willow-scrub and long grass at the port itself (on the 30th of May and the 2nd of June, 1913, when a pair was seen and secured on each of these dates; at the end of May and on the 5th of June, 1915, when several specimens were seen; and in 1917 from the 21st of May to the beginning of June). It is probable that this Reed-Warbler breeds in the marshes of the district. In autumn it abounds in the millet crops, which it works in parties, generally in company with *A. sorghophilus* and *A. bistrigiceps*, flitting through the cover and occasionally sidling up to the millet tops, where the birds sit, preening their feathers for a short time before commencing their search after food. It does not appear to frequent paddy-, sorghum- or maize-fields, but I once, on the 16th of September, shot one out of a party in a patch of reeds in a marsh. I have never heard the bird utter a sound. It seems to moult towards the end of August.

31. *Acrocephalus sorghophilus* (Swinhoe).

Calamodyta sorghophila Swinhoe, P. Z. S. 1863, p. 292.

Calamodus sorghophilus D. & O. p. 246.

Acrocephalus sorghophilus La Touche, Bulletin B. O. C. vol. xxix. 1912, p. 141; La T. p. 568.

The first example of the Chinese Sedge-Warbler was shot by Swinhoe at Amoy (S.E. Fohkien) in May 1861. No other appears to have been taken until January 1902, when one was shot in the Babuyan group of the Philippine Is. (Bulletin Philippines Museum, No. 4, 1904, p. 29). After a further interval of nine years one specimen was taken at Shaweishan, thirty miles from the mouth of the Yangtse, on the 2nd of June, 1911. Five days after, I shot another at Chinwangtao, and at the end of that summer, on the 22nd and 29th of August, 1911, I shot two more in the crops near the port. In August and September 1912, I again secured examples in the millet crops, where I found this Reed-Warbler to be common. In the following spring (1913) a large number passed the port on migration at the end of May and beginning of June, and that year and the following the bird was common, as before, in the millet crops at the end of the summer. The spring passage thus appears to take place late in May and during the first week in June, and the autumn passage from about the 22nd of August to the 7th of September. The breeding-grounds will probably be found in south Manchuria and possibly within the limits of north-east Chihli. As it has never been taken on the Yangtse or in the Indo-Chinese countries, we must presume that the line of migration followed by this bird is from the Philippine Is. *via* Formosa to Fohkien, and thence up the China coast to north-east Chihli. We have no record of the autumn migration from elsewhere than Chinwangtao, but the presumption is that the course followed is the same as in the spring.

The bright-coloured upper parts of this Sedge-Warbler causes it to be easily distinguished in the open from the more soberly tinted *A. bistrigiceps*, and its gliding flight with outspread tail from *A. tangorum*. Spring birds are as

a rule rather heavily and regularly streaked on the crown and mantle and have the black superciliary stripe very apparent; they are less fulvous above than autumn birds. The latter are of a warm ochreous light brown above, with very few streaks and a less apparent black eyebrow. Two August specimens, probably birds of the year, have this black eyebrow almost entirely concealed by the fulvous edging of the feathers.

Iris hazel or greyish hazel; upper mandible dark brown, edged with fleshy yellow; lower mandible fleshy yellow; mouth yellow; legs greenish plumbeous; soles of feet greenish yellow. Total length of a male shot on the 7th of June, 1911, 5.30 in. (135 mm.).

35. *Arundinax aëdon* (Pallas).

Arundinax aëdon D. & O. p. 254; La T. p. 568.

Pallas's Reed-Warbler is, next to *A. bistrigiceps*, the most conspicuous of the Reed-Warblers seen at the port during migration. It appears in spring from the middle of May to the beginning of June, and in autumn from about the 17th of August to the end of September. One was shot in 1911 on the 16th of October, but it was probably a belated instance. This bird is generally very shy, and consequently it is not always easy to identify, its strong resemblance to *A. orientalis* making it often difficult to ascertain which of these species is so sedulously endeavouring to elude observation. It is most probably a summer visitant, as I once saw it singing on a willow in a likely nesting locality on the 2nd of June. It breeds near Peking on reed-covered ponds (*David*).

This Warbler was common in May and late August 1889 about Newchwang.

36. *Tribura thoracica* (Blyth).

Dumeticola affinis D. & O. p. 247 (part).

In 'Les Oiseaux de la Chine' Père David mentions under "*Dumeticola affinis*," birds obtained near Peking in summer which differed slightly from those found in the

Himalayas, though he did not otherwise distinguish them. Our house-cat caught on the 4th of September, 1912, a young bird of this species, and I shot two adults from brushwood on the 31st of May and the 1st of June, 1917. These, together with a wing (remains of a bird eaten by a cat) found on a doorstep on the 1st of October, 1914, are the only specimens obtained by me at Chingwangtào during a stay of seven years.

The soft parts etc. of these adult birds were:—Iris rather pale brown; bill black; mouth pink; legs dark pink or flesh-colour.

Two males:—Wing 2·03 and 2·06 in.; total length 5·05 and 5·25 in.; 1st primary 0·51 in.; 2nd primary equal to the 7th; the 3rd and 4th equal; the 5th almost equal to them, but just below.

The young bird, a male, is rather paler above; lores and an indistinct short eyebrow yellowish; under parts dull pale primrose-yellow, the feathers of the breast edged with olive-brown and faintly spotted; throat and vent whitish yellow; under tail-coverts (very long and covering outer rectrices) pale olive-brown, broadly tipped with dull yellowish.

Iris grey-brown; upper mandible of bill blackish, edged with pink; lower mandible flesh-colour, shading to yellow at the base and with a dark point; rictus yellow; legs flesh-colour, with a tinge of brown on the feet; soles of feet and hind part of tarsus light yellowish green.

Bill from gape 0·60, culmen 0·45, wing 2·05 in.; the 1st primary 0·55 in. The 2nd primary is equal to the 7th; 3rd, 4th, and 5th longest and equal. Tail (worn) 1·85 in.; the outer rectrix about 0·50 in. shorter than the central. Tarsus 0·70 in. The specimen has a deformed foot, turned backwards. It appears to be a young bird of the year.

37. *Herbivocula schwarzi* (Radde).

Herbivocula flemingi D. & O. p. 245.

Herbivocula incerta D. & O. p. 246.

Herbivocula schwarzi La T. p. 568.

Radde's Bush-Warbler is a common migrant in this

district. It passes from the middle of May to the first days of June, and from about the 20th of September until the middle of October. Most of the autumn birds are in fresh-moulted pale plumage (*H. incerta* D. & O.), as are also most of those taken or noticed in spring. Examples in olive and bright buff-yellow plumage are to be seen in autumn but less commonly. This Bush-Warbler is a very shy bird, and if it is at all suspicious of danger, keeps itself well concealed in bushes and high grasses, constantly uttering a nervous "twit-twit." In 1912, from the 19th of September to the end of the month, it was very abundant and swarmed all over the island.

Total length of a male with pale under parts 5·65, wing 2·6, culmen 3·5, bill from gape 5·5, tarsus 0·88, tail 2·25 in. Females are much smaller.

The soft parts of this bird were as follows:—Iris dark brown; upper mandible very dark livid green; lower mandible deep greenish yellow, green towards the tip; gape and mouth yellow; legs warm gamboge; front of tarsus brownish.

38. *Herbivocula fuscata* (Blyth).

Phyllopneste fuscata D. & O. p. 267.

Herbivocula fuscata La T. p. 568.

The Brown Bush-Warbler is a very common migrant. It passes from about the 20th of April to the end of May, and from the beginning of September to the latter half or end of October. I have one shot at Shanhaikuan as late as the 18th of November.

This bird shows considerable variation in the tints of the lower plumage and in its proportions. It is a bush-frequenting species, fond of damp places, and it seeks its insect-food on the ground or close to it.

39. *Phylloscopus borealis* (Blasius).

Phyllopneste borealis D. & O. p. 271.

Phylloscopus borealis La T. p. 569.

The Arctic Willow-Warbler is common from the middle of May to well on in June, and from about the 10th of

August to the middle of September. While on passage at the port it is often seen flitting about the grass or low bushes as well as on trees.

40. *Phylloscopus nitidus plumbeitarsus* Swinhoe.

Phyllopneuste plumbeitarsus D. & O. p. 270.

Phylloscopus plumbeitarsus La T. p. 568.

The Plumbeous-legged Willow-Warbler is abundant on passage in spring and autumn. It generally travels with *P. borealis*, but remains much later in autumn. I have observed it from the middle of May to the first week in June, and from the latter half of August to about the 22nd of September. It must remain later, for in 1911 the collectors shot one on the 4th of October. At the beginning of September 1913 and 1914 this bird swarmed for a few days on some jujube-bushes behind our house, which were infested with leaf-devouring insects. When disturbed it utters a loud cry somewhat like that of *P. borealis*, but louder and more drawn out. The legs are always more or less suffused with plumbeous, but I have handled only one which has the tarsus of a uniform pure plumbeous.

41. *Phylloscopus tenellipes* Swinhoe.

Phyllopneuste tenellipes D. & O. p. 269.

The Pale-legged Willow-Warbler is not common at Chinwangtao. I procured only two specimens—one on the 29th of September, 1912, and one on the 7th of September, 1914. The call is a loud "tsic," somewhat resembling that of the preceding two species.

42. *Phylloscopus coronatus* (T. & S.).

Phyllopneuste coronata D. & O. p. 269.

Phylloscopus coronatus La T. p. 569.

Temminck's Crowned Willow-Warbler seems to be a scarce migrant. I have never seen it at the port. Three examples were observed a few miles inland by the collectors on the 16th of May, 1913, two of which were shot.

This Willow-Warbler was common at Newchwang in May and at the end of August 1889.

43. *Phylloscopus superciliosus* (Gm.).*Reguloides superciliosus* D. & O. p. 273.*Phylloscopus superciliosus* La T. p. 569.

The Yellow-browed Willow-Warbler is abundant on migration. I have observed it from the 11th of April to the 25th of May. It appears at the end of August with the other Willow-Warblers, but the majority arrive in September, and migration lasts until the end of October. The earliest date on which I have seen it on the autumn passage was the 19th of August, 1913, and the latest date was the 30th of October, 1914. This Willow-Warbler was common at Newchwang in May and at the end of August 1889.

44. *Phylloscopus proregulus* (Pallas).*Reguloides proregulus* D. & O. p. 274.*Phylloscopus proregulus* La T. p. 569.

Pallas's Willow-Warbler is a common migrant in the district. It occurs from the first week in April to early in the latter half of May, and from about the 22nd of September to the end of October. Rushes of this little bird occur in early spring and in October, when they may be seen swarming everywhere and even occasionally penetrate into houses.

I saw this species near Newchwang on the 20th of May, 1889.

45. *Luscinola pryeri sinensis* Witherby.*Luscinola pryeri sinensis* Witherby, Bulletin B. O. C. vol. xxxi. 1912, p. 11.*Luscinola sinensis* La T. p. 569.

Description. "Adult male and female. Summer plumage. Differ from *L. p. pryeri* (Seeböhm) in the much less rufous colouring of the upper parts, the whiter colour of the breast and belly, and in having a rather longer tail. General colour of the upper parts bright brownish buff striped with black, the feathers being black broadly margined with bright brownish buff, the black markings being more restricted on the upper tail-coverts; forehead with only narrow streaks of black; lores and over the eye whitish; ear-coverts and side

of neck brownish ; throat, breast, and belly white, the sides flanks, thighs, and under tail-coverts bright buff. Under wing-coverts and axillaries greyish white ; wing-feathers brownish black, with broad buff edgings to the outer webs ; the four innermost secondaries with the outer webs deep black margined with bright buff. Tail buffish brown with black shaft-stripes, narrow on the outer feathers and becoming much broader on the middle feathers" (*Witherby*).

"Iris dark amber ; legs and feet pallid flesh-colour" (*H. Lynes*). The soft parts of two specimens shot at Chinwangtao were as follows :—

♂. 14th of April, 1911.—Iris light brown ; upper mandible black, rimmed with pink ; lower mandible pink ; legs yellowish pink. Wing 2·38 in.

♂. 14th of April, 1911.—As in above, but legs tinged with plumbeous. Wing 2·22 in.

Wings of nine examples shot in autumn measure from 1·90 to 2·25 in., average 2·10 in.

The proportions of Captain Lynes's Hankow specimens given by Mr. Witherby are as follows :—

♂. Bill (from nostril) $6\frac{1}{2}$ mm. ; wing 59, 57, and 56 ; tail 62 and 61 (worn), 46 (much worn).

♀. Bill (from nostril) $6\frac{1}{2}$ mm. ; wing 54, 53, and 51 ; tail 54, 54 (worn), 47 (much worn).

The Chinese Marsh-Warbler was first seen by me on the 14th of April, 1911, when I shot one at the marshes near the port. Two days after I saw a couple more at the same place and shot one of them. These birds were found in the grass on the edge of the marsh. When pursued they flew into it and hid in the grass in the ponds. A third example was shot by the collectors on the 19th of October, 1911, and a fourth at the port itself on the 24th of April, 1913. In the meantime the bird had been discovered by Captain H. Lynes, R.N., in March 1912 at Hankow, where it winters in the neighbouring swamps. I did not come across this Warbler again until the 18th of October, 1914, on which date, while duck-shooting in the marshes, I found the birds swarming on the grassy banks and among the

sedgy grass of the locality. On this occasion the birds behaved like Grasshopper-Warblers, and when on the wing looked like pale-coloured *Locustella*. A high wind was blowing, and probably on this account they took but very short flights and dropped into the grass a few paces ahead, rising again when I was close upon them. After being put up once or twice they flew with a swift, low, and straight flight into the jheels, where they hid in the sedges. I managed to secure two or three, and having run short of collecting cartridges, I was returning home, when I met a party of men out hawking with Sparrow-Hawks. These men had taken several of the Warblers, and on my offering a small reward they proceeded to catch me some. Several of the birds thus caught were sufficiently uninjured to be made into fair skins. On the way across the plain I put up one out of the crops. The breeding-quarters of this Warbler have yet to be discovered. Probably Manchuria is the locality.

46. *Rhopophilus pekinensis* (Swinhoe).

Rhopophilus pekinensis D. & O. p. 260, pl. 19.

The North China Hill-Warbler is very common in the mountains of north-east Chihli. I met with it among scrub oak about twenty miles north of Chiuwangtao, and have specimens shot much nearer the port as well as a series from the Chien An district. A single bird appeared at the port in October 1915, and remained there during about two months. In the spring of 1917, after the pruning of the acacia plantations, one individual was again conspicuous, but unfortunately it was trapped by a Chinese and soon died. The body was brought to me. It was a female, much soiled with coal smoke, and was probably the bird seen eighteen months before. A cage-bird of this species offered to me for sale was so tame that its owner would let it out in the open, the bird returning obediently when called. I had a live bird, trapped in May 1917, which soon became very tame. This bird, which I had put in a cage containing Buntings, Finches, etc., when it saw me coming into the

room would cling to the wires in expectation of the coming food, and on my opening the cage would fly on to my hand and take food while perched on it. It spent a great deal of its time perched close against some of the other birds, holding out its head and neck to have its feathers preened by them. Some of the birds, however, with an eye to nesting, took advantage of this to pluck its feathers, so that I had to take it out, and when it found itself alone, it became shy and remained so.

I fed this bird on green-bean paste, chopped raw beef, and bread and milk, also on hard-boiled egg. It was fond of caterpillars and ate certain kinds of small green grasshoppers, but would not touch the brown grasshoppers that other birds prefer to the green ones. It was sent to London in June 1919, but unfortunately did not reach the Zoological Gardens. In the summer of 1918, while at Shasi (Hupeh, Central China), it moulted badly, being unable to grow its tail, which appeared as a bunch of flexible plumes, the shafts of the retrices being only furnished with vanes at intervals in the shape of rounded spatules—about three of these to a rectrix. I then suspected that there was something wrong with the sand furnished—this was very fine river sand. I substituted coarser hill-stream sand, which caused an almost immediate change. The bird's tail-feathers began to grow strong and normal, keeping at their tip the curious plumes mentioned above, which were gradually shed as the retrices grew. The tail eventually became normal and of full length. Some nestlings brought to me died the same day of their arrival from the hills.

The bird nests in May. Nests with eggs were brought to me on the 11th, 16th, 23rd, and 29th of May, 1917. The eggs in the last nest brought were incubated, but those in all the others were either quite fresh or slightly incubated. The full clutch consists of five eggs. These are greenish white, speckled, spotted, or even blotched with umber-brown and dark and pale violet, the latter tint being that of markings within the shell. The markings are chiefly on the large end, generally forming a wreath. They are quite

without gloss. The shape is ovate, occasionally oval or oval-ovate.

They vary in size from 0.75×0.55 in. to 0.83×0.61 in. Thirty-four eggs average 0.77×0.57 in.

The nest is a well-made, neat, and deep cup of soft dry grasses, thickly and strongly bound with strips of grass-skins, and much plastered over exteriorly with hair, cobwebs, and cocoons. It is not unlike that of *Suthora webbiana*. The natives who brought me the nests told me they were placed in bushes. The inside measurements in nine cases are: depth 2 to $2\frac{1}{2}$ in., average 2.20 in.; diameter 2 to $2\frac{1}{2}$ in., average 2.20 in. The outer measurements are: depth $2\frac{1}{4}$ to 3 in., average $2\frac{3}{4}$ in.; diameter $3\frac{1}{2}$ to 4 in., average 3.64 in.

47. *Dicrurus ater cathæcus* Swinhoe.

Dicrurus cathæcus D. & O. p. 108.

Buchanga atra La T. p. 567.

The Black Drongo is an uncommon migrant in spring. I have very few records of its occurrence at that season, and but one or two birds might be seen at any time between the 20th of May and the 11th of June. It is extremely abundant in September, passing with the myriads of Swallows, Pipits, and Wagtails, which during that month stream down the coast. While travelling it often tarries on the plains, perching on the kaoliang and catching insects on the wing. Sometimes it forms huge noisy parties on some solitary tree in the fields. The calls while thus resting and feeding are cheerful and musical. The birds when passing fly in very scattered order, and appear to come from an easterly or north-easterly direction. I have noticed this Drongo migrating from the first week in September to the end of that month. I have seen one on the 24th of August.

Four nests, containing respectively four hard-sat, two incubated, three fresh eggs, and one broken egg, were brought to me on the 25th of June from the mountains north of the port, and two more nests from the same locality on the 15th of July containing two and three

fresh eggs. These are of two types: white, sparsely speckled with very dark brown, and warm orange-salmon or orange-buff, blotched chiefly at the large end with burnt sienna over underlying violet markings. Fourteen eggs measure from 0.99×0.67 in. to 1.05×0.75 in., and 1.04×0.77 in. They average 1.01×0.74 in.

The nests were strong shallow cups or fairly deep saucers, composed chiefly of kaoliang-seed flower tops and similar grass tops and rootlets, bound with cobwebs and cocoon silk. Five nests measured had an inner depth of $1\frac{3}{4}$ in. (three nests) and $1\frac{1}{2}$ in. (two nests), with an inner diameter of $3\frac{1}{2}$ in. The outer depth varied from 2 to $2\frac{3}{4}$ in. and the outer diameter from $4\frac{3}{4} \times 6$ in. to 6 in. The nests had apparently been taken from forks of horizontal branches.

48. *Lanius sphenocercus* (Cabanis).

Lanius sphenocercus D. & O. p. 92, pl. 76; La T. p. 569.

The Chinese Grey Shrike is found sparingly in spring, but much more commonly on the return passage, when it may be seen from the beginning of September, throughout October, and in November. A number winter in the district. This Shrike may be seen hovering like a Kestrel. Generally it takes up a position on some high bush or tree in the open plain, and is always a very conspicuous object. Birds obtained in early September had newly moulted, and all autumn birds have their plumage of a very pure white and grey. During the winter the plumage becomes dingy, and specimens shot in spring have their feathers dirty and worn. A large Grey Shrike seen near Newchwang on the 6th of September, 1889, was probably of this species. Another was seen by a friend during the following winter.

49. *Lanius mollis* Eversmann.

A medium-sized Grey Shrike with a rounded tail and under parts waved with brownish grey, each feather being bordered with this colour, was shot at the hills north-west of the port on the 12th of October, 1911. According to Dr. Hartert (Nov. Zool. vol. xiii. 1906, p. 393), this bird should stand as

Lanius mollis Eversmann. I shot another of these Siberian Grey Shrikes at the port itself on the 25th of October, 1914. This specimen, however, is slightly the larger and has greyish-white upper tail-coverts. It is probably a younger bird, as it is tinged above with buff and the ear-coverts are brownish grey.

These two birds measure :—

♂. 12th of October, 1911. Wing 4·55 in., tail 4·35 in.
 ♀. 25th „ 1914. „ 4·55 in., „ 4·53 in.

50. *Lanius bucephalus* T. & S.

Lanius bucephalus D. & O. p. 98 ; La T. p. 569.

The Bull-headed Shrike is evidently a rare migrant at Chinwangtao. I have an adult male shot at Shanhaikuan in April 1913. My collector, who procured me the bird, told me that these Shrikes had been passing Shanhaikuan that month. I saw an adult male at Chinwangtao on the 31st of March, 1914, and again the following day in the same place one which was probably the bird seen the day before.

51. *Lanius tigrinus* Drapiez.

Lanius magnirostris D. & O. p. 97.

The Thick-billed Shrike was not seen by me at Chinwangtao, neither did the collectors, who worked the vicinity assiduously during the spring of 1913, come across any ; but my collector shot two adult males at Shanhaikuan on the 26th of May, 1914. He seemed to consider this Shrike a very rare bird.

I was brought two nests on the 2nd of July, 1917, which I suspect must belong to this bird. They were taken in the mountains, north of the port, and were found placed high up in trees. The taker of these nests positively assured me that the owners were Shrikes, but that he could not snare the birds, owing to the position and height of the nests. One of these is a strong, compact cup, with thick sides made of rootlets and fine grasses, a few flower- and

grass-tops, with moss at the base and some animal fur worked into the inner rim of the nest. The lining is of very fine grass stems. This nest measured 2 in. in inner height and $2\frac{1}{2} \times 3$ in. in inner diameter. The outer measurements were: depth $2\frac{1}{2}$ in. and diameter $4\frac{1}{2}$ in. The eggs have a pale orange-yellow ground, and are thinly speckled with blackish brown over dark grey underlying spots and specks. They measure 0.80×0.64 in., 0.83×0.64 in., 0.83×0.65 in., and 0.92×0.67 in.

This Shrike summers at Newchwang, South Manchuria.

52. *Lanius lucionensis* L.

Lanius lucionensis D. & O. p. 99 ; La. T. p. 569.

I have but few records of the Philippine Red-tailed Shrike from Chinwangtao itself, as it is difficult to distinguish it in the field from the following species, but I have noted it both in spring and autumn and have a specimen from Chien An. It nests abundantly in the mountains north of Chinwangtao, whence some twenty-six nests were brought to me (ten clutches received on the 25th of June, 1917, ten on the 2nd of July following, and six others on the 15th of the latter month). Nine of those brought on the 25th of June were fresh, the others were all incubated or hard-set. The nests, large stout cups composed of downy grass tops, feathers, twigs, grass stems, and in two cases to a great extent of pheasants' feathers, were said to have been all placed in trees at some distance from the ground. Ten nests measured were about 2 in. deep by 3 in. in diameter (inside measurements), and from $2\frac{1}{4}$ in. to $3\frac{3}{4}$ in. in outer depth by about $5\frac{1}{2}$ in. in outer diameter. The eggs show great variety in size, tints, and intensity of markings.

53. *Lanius superciliosus* Latham.

Lanius superciliosus D. & O. p. 100 ; La T. p. 569.

The Japanese Red-tailed Shrike is very common on migration in spring and early autumn. It appears about the middle of May (earliest record 11th May), and may

be seen until the beginning of June. The autumn passage takes place from about the 20th of August to the end of September. It is most plentiful at the end of August and beginning of September. Being a shy bird, it is, as a rule, very difficult to decide whether individuals, especially in autumn, belong to this species or to *L. lucionensis*. Possibly some of the Red-tailed Shrikes seen or obtained were *L. cristatus*.

54. *Pericrocotus cinereus* Lafresnaye.

Pericrocotus cinereus D. & O. p. 107 ; La T. p. 569.

A few Ashy Minivets pass through the district from about the middle of May to the beginning of June. I saw a couple on some trees near the seashore on the 29th of September, 1912. I have an example from Chien An.

55. *Oriolus indicus* Jerdon.

Oriolus cochinchinensis D. & O. p. 133.

Oriolus diffusus Sharpe, D. & O. p. 559.

Oriolus indicus La T. 1914, p. 570.

The Black-naped Oriole summers in the district, as elsewhere in China. I have occasionally seen arrivals at the port itself, and on the 5th of June, 1915, some birds appeared on the trees there, when, probably for the first time, the beautiful liquid notes of the bird were heard at Chinwangtao. The middle of May is about the earliest date of spring arrivals, and the birds must leave in September, as they occasionally appear at the port during that month. A nest taken at Shanhaikuan on the 10th of July, 1915, contained three fresh eggs. Two of these, brought to me by my collector, are of the usual blush-pink colour, with deep carmine spots chiefly disposed about the large end. They are moderately glossy. The shape is narrowly ovate. They measure 1.18 × 0.81 in. and 1.26 × 0.82 in.

Five other nests with eggs were brought to me from the mountains to the north of the port on the 10th of June, 1917. One clutch was fresh, the others incubated and stale.

56. *Spodiopsar cineraceus* (Temm.).*Sturnus cineraceus* D. & O. p. 361.*Spodiopsar cineraceus* La T. p. 570.

The Grey Starling passes in spring from the end of March to about the 20th of May. It appears again in July, and may be seen in autumn until the beginning of October. On the 4th of July, 1914, thousands came over from the north-east, flying south-west. Flocks containing from fifty to over three hundred individuals followed one another rapidly during the afternoon, and the passage lasted two hours or more. This was the only passage of the kind noticed by me here. On every other occasion that I saw these birds in summer they were in very small parties. However, on the 24th of July, 1915, I saw a large flock of Starlings passing which were probably of this species, so that it is likely that the main flights during other summers were overlooked. At Shaweishan, in 1908, a few individuals were noticed at the end of June and beginning of July. I do not know whether they breed here, but, as I saw on the 21st of May two birds apparently paired, it is probable that some summer here.

Two examples netted in the summer of 1913 are pale buffish sandy, except on the abdomen, under tail-coverts, axillaries, and under wing-coverts, cheeks, and ear-coverts, these parts being white, as are also the outer webs of the basal part of the middle secondaries and primaries. The wings and tail are darker than the body. My collector, who brought me these birds, told me that this pale variety was not uncommon.

57. *Sturnia sturnina* (Pallas).*Temenuchus dawricus* D. & O. p. 362.*Sturnia sturnina* La T. p. 570.

The Daurian Starlet passes in small numbers during the latter half of May. Large flocks may be seen in August on the return migration. I have seen a few at Chinwangtao itself from the 6th of August to the 2nd of September.

A live male example purchased in June, 1916, kept in good health until the autumn, when it sickened and died. It was a cheerful little bird and sang often, the song being

occasionally harsh, but containing many melodious notes. It was very cleanly and was very fond of bathing, keeping its plumage so free from dirt that, when it died, it was difficult to tell from the made-up skin that it was a cage-bird. This bird's favourite food seemed to be bread and milk. It also ate millet and raw beef, but did not care for fruit or grasshoppers. However, when plants covered with aphides were placed in the cage, it picked these off with evident pleasure.

I shot specimens of this Starlet near Newchwang in May 1889.

58. *Alseonax latirostris* (Raffles).

Butalis latirostris D. & O. p. 123.

Alseonax latirostris La T. p. 570.

The Broad-billed Flycatcher is common on migration. It passes from early in May to the end of the month, and I have seen it on the return passage from early in August to about the 8th of September. I once shot one which was standing on the mud on the bank of a ditch, and on another occasion I saw one fly down to a garden-path from its perch on neighbouring trees, and hop along the ground picking up food.

59. *Hemichelidon sibirica* (Gm.).

Butalis sibirica D. & O. p. 122.

Hemichelidon sibirica La T. p. 570.

The Siberian Flycatcher is common on migration. It passes from the middle of May to late in June and during August and the early part of September.

I shot a young bird in spotted plumage at Newchwang in August 1889.

60. *Siphia parva albicilla* (Pallas).

Erythrosterina albicilla D. & O. p. 120, pl. 79.

Siphia albicilla La T. p. 570.

The Red-throated Flycatcher is about the commonest of the Flycatchers which pass Chinwangtao. It occurs from early in May to the beginning of June, and I have seen it

from the 29th of August to the middle of October. One specimen was seen on the 29th of October. In spring most of the males have the red throat and grey breast. On the return passage they are all in winter dress. This Flycatcher has very terrestrial and Robin-like habits. It is fond of flitting along hedges and trees bordering roads. It often descends to the ground in the open fields, perching on clods of earth, and finds much of its food on the ground. It has the habit of jerking up and flirting its tail like the Robins. When on the wing, its black-and-white tail makes it a very conspicuous object.

I shot a specimen of this bird near Newchwang at the end of May 1889.

61. *Poliomyias luteola* (Pallas).

Erythrosterina luteola D. & O. p. 121.

Poliomyias luteola La T. p. 570.

The Robin Flycatcher is a scarce migrant in the vicinity. Three examples were seen on the 20th of May, 1913, and one on the 23rd of that month by the collectors. A passage of this Flycatcher occurred at Chinwangtao on the 16th of May, 1916, when it was numerous. I have no autumn records.

62. *Cyanoptila bella* (Hay).

Cyanoptila cyanomelæna D. & O. p. 116, pl. 81.

So far I have not collected the Blue and White Flycatcher in north-east Chihli. It is, however, well-known, and it is much valued as a cage-bird by the natives on account of its song.

I saw specimens in captivity at Newchwang in 1889.

63. *Xanthopygia tricolor* Blyth.

Xanthopygia tricolor D. & O. p. 118, pl. 80; La T. p. 570.

The Tricolor Flycatcher passes in small numbers in spring. I saw one at the port on the 11th of May, 1911, another on the 16th of May, 1916, while the collectors shot or observed examples on the 13th, 16th, and 20th of May, 1913. I have

a specimen shot at Shanhaikuan on the 7th of May, 1914. I have not seen the bird on the return passage.

The Tricolor Flycatcher is a common migrant at Newchwang in May. It is easily trapped by the natives, but does not stand captivity well.

64. *Terpsiphone incii* (Gould).

Tchitrea incii D. & O. p. 112, pl. 82.

Terpsiphone incii La T. p. 570.

Ince's Paradise Flycatcher arrives at Chinwangtao about the 20th of May and the passage lasts until well on in June. It appears again during the last week in August and occurs until the 23rd or 24th of September. I have an example from Chien An. This bird breeds in the mountains north of the port, whence I have a white-plumaged male and had a clutch of four eggs, almost hatching, brought to me on the 2nd of July, 1917. I shot a white-plumaged male, the only one seen at Chinwangtao, on the 7th of June, 1913. The white feathers of this bird are all broadly edged with black, and one of the innermost secondaries has a trace of chestnut. The tail measures only 9.5 in.

The flight of this Flycatcher in the open is swift, and the tail streaming behind it reminds me of an arrow shot from a bow. It is difficult to understand how such an apparently unwieldy appendage does not prevent its owner from travelling, but it is a fact that the Japanese Paradise Flycatcher is found in spring at Shawsheishan with fully-grown rectrices, and that to reach Japan from that island it has to cross over 450 miles of open sea. The Chinese bird very probably travels overland. Only one example was taken at Shawsheishan, and that was on the autumn migration. The birds seen in autumn are all in red plumage with short tails. In spring most of the males have the long central rectrices, and breed in the red plumage as well as in the white. The latter plumage, which is that of the old males at least two years old, is without doubt moulted at the end of the summer before the autumn migration begins.

65. *Pratincola torquata stejnegeri* Parrot.

Pratincola indica D. & O. p. 167.

Pratincola maura La T. p. 571.

The Eastern Stonechat is an extremely common migrant in north-east Chihli, and passes from early May to the end of the month, and again from the middle of August to the end of September or beginning of October.

66. *Saxicola pleschanka* Lepechin.

Saxicola morio D. & O. p. 166 ; La T. p. 570.

The example recorded by me in 'The Ibis' as shot on the 27th of April, 1913, is the only one I have seen here. It was obtained on the island, and had probably accompanied a party of Stonechats which were here that day.

The Chinese White-capped Chat is said by Père David to be a summer visitor to the mountains of Chihli. The migration route usually followed must, of course, be entirely inland, and the bird mentioned above was a straggler to the coast. It probably breeds in the vicinity of Chinwangtao.

67. *Rhyacornis fuliginosa* (Vigors).

Rhyacornis fuliginosa D. & O. p. 166.

I have a single female example of the Plumbeous Water Redstart, which was shot in January 1912 in the Shanhaikuan mountains. This is the only example obtained by me during a seven years' stay at Chinwangtao, but I believe that the bird has been obtained in the Tung Ling.

The specimen obtained has the flanks more uniformly grey than females from Fohkien, but is otherwise similar. It was identified at the Natural History Museum by Mr. Ogilvie-Grant.

68. *Ruticilla aureora* (Pallas).

Ruticilla aureora D. & O. p. 170, pl. 26 ; La T. p. 571.

The Daurian Redstart is one of the first insectivorous Passeres to appear at the port in spring. It may be seen throughout March and in early April. One was seen in 1913 as late as the 19th of April. It pairs again during the first ten days of October. It is common during

summer in the mountains, and breeds there in holes of walls and rocks. A single egg without any nest was brought to me from the country, about twenty-five miles north of Chinwangtao, on the 11th of May, 1917, and seven clutches with nests on the 11th, 15th, 16th, and 23rd of May, 3rd of June, and 2nd and 15th of July, 1917. This last clutch was much incubated and somewhat stale, and must have been taken several days previously. The single egg and the four clutches brought on the 11th and 23rd of May, 3rd of June, and 2nd of July have the ground-colour white and show very little gloss; three clutches received on the 15th and 16th of May and on the 15th of July are pale green and glossy. This bird thus lays two very different types of eggs: one, with whitish ground-colour, tinged with orange when the shells are still fresh, speckled or stippled and sometimes blotched with more or less pale burnt sienna over underlying spots (sometimes blotches) of reddish violet. There is almost invariably a ring round the large end, sometimes a cap, the apex being more lightly marked; and one, which is glossy, with a pale bluish-green ground-colour, speckled or occasionally blotched with pale burnt sienna over underlying reddish violet. The shape of the white eggs varies from ovate and narrow ovate to oval; that of the green ones is ovate in two clutches, the eggs of the third clutch being broad ovate or broad oval. Twenty-one white eggs measure from 0.72×0.54 in. to 0.77×0.56 in. (another smaller egg being 0.69×0.56 in.). They average 0.75×0.54 in. Sixteen green eggs measure from 0.70×0.54 in. to 0.77×0.62 in., and average 0.74×0.57 in. The clutches collected comprise five or six eggs: two white and two green clutches having five eggs each, and two white and one green clutch six eggs each.

The nests were shallow rough pads or cups made of moss, soft grass strips, and feathers (pheasants' and, in one instance, domestic fowls'). They were all taken from holes in walls or rocks.

A male nestling has brown upper parts, the feathers edged with black and centred with dull buff, rump lighter, upper tail-coverts rufous, the feathers edged with blackish, lesser wing-coverts like the back, larger wing-coverts tipped with dull buff, wing-quills edged with dull chestnut, central tail-feathers dark brown tipped with chestnut. The under parts are dull pale buff, breast and flanks darker, the feathers edged with blackish, under tail-coverts light rufous (a bird dated 23rd of May).

A full-fledged young male is very similarly coloured, and has a large white patch on the secondaries. The tail and innermost secondaries are broadly edged with dull pale chestnut (date about 2nd of June).

A young male of the year had the head and upper back ash-coloured, the basal part of the crown-feathers being white (date 4th of October).

69. *Cyanecula suecica* L.

Cyanecula caerulecula D. & O. p. 234; La T. p. 571.

The Red-spotted Blue-throat is a very common migrant in north-east Chihli and is specially abundant in spring. It passes in May from about the 9th to the 24th, and on the return passage from about the 10th of September to the middle of October. It is a sparse winter visitant to south-east China.

A female shot here on the 15th of May has the chin and malar region blue; the throat is white mixed with black towards the chin, and there is a band of blue on the breast.

70. *Calliope camschatkensis* (Gm.).

Calliope camschatkensis D. & O. p. 235; La T. p. 571.

The Common Ruby-throat is scarce at Chinwangtao in spring, when it passes in May. During the autumn passage it is very abundant, and passes then from about the 10th of September to the end of that month. The popular saying among the Chinese regarding this and the preceding species

is: "Ch'un lan, Ch'iu hung" (in spring the blue, in autumn the red).

The female of this bird is generally described as having the throat white, but old females have sometimes a considerable amount of the ruby colour. Two of these birds taken at Shaweishan on the 8th of May and 27th of October have the throat as richly coloured as young males, while two others taken in the same locality on the 1st of May and 29th of October have the edges of the feathers just tinted with red. The general plumage of these four birds is that of the adult female. Mr. Stejneger (Proc. U.S. Museum, vol. xv. p. 321) mentions a female examined by him which has the ruby throat, and Professor Lönnberg (Journ. Coll. of Sci. Imp. Univ. of Tokyo, vol. xxiii. art. 14, p. 33) writes of another from Saghalien that it had "the throat white and somewhat washed with scarlet."

71. *Ianthia cyanura* (Pallas).

Ianthia cyanura D. & O. p. 231.

Ianthia cyanura La T. p. 571.

The Blue-tailed Robin is a very common migrant in north-east Chihli, and numbers pass Chinwangtao in spring and autumn from the beginning of April to mid-May, and from the latter half of September to the beginning of November (latest record 9th of November).

This bird is one of the earliest insectivorous Passeres to appear at Newchwang in spring.

72. *Merula obscura* (Gm.).

Turdus obscurus D. & O. p. 153.

Merula obscura La T. p. 571.

The Grey-headed Ouzel passes sparingly throughout May and at the beginning of June. In autumn I have observed it from the 14th to the 24th of September.

A living adult male example, brought down in September 1915 from Chihfeng in north Chihli and given to me by Mr. A. L. Hall, lived in good health and preserved its

colouring until October 1917, when I released it on my leaving Chinwangtao. This bird was principally fed on bread and milk and raw beef, but also ate small millet, insects, grapes, and the fruit of *Cratægus pinnatifida*. It remained very shy almost to the last, and I never heard it utter any sound but its cry of alarm.

N.B.—*M. pallida* (Pall.) most probably occurs here also on migration, but I have not procured any specimens.

[To be continued.]

XXIV.—*Some Observations on the Birds of Islands of Milos, Lemnos, and Imbros, Ægean Sea.* By J. H. STENHOUSE, M.B., R.N.

THE following notes are based on observations made during the winter season of 1915–16 in three islands of the Greek Archipelago—viz., Milos from 25 November to 13 December; Lemnos from 14 December to 23 December; and Imbros from 25 December to 21 January. Of these islands, Imbros lies nearest the European coast, being about 12 miles from the Dardanelles; Lemnos is 30 miles away to the south-west and about 40 miles due south of the Greco-Bulgarian coast; while Milos is the south-western island of the group, being about 60 miles off the south-eastern coast of Greece and 70 miles north of Crete. Owing to the difference in latitude, Milos has a much milder winter climate than either of the other two. Lemnos is very bare, with hardly a tree. Imbros is better covered with vegetation, and pines grow in places on the hills. Milos is a volcanic island in which activity is not yet at an end. It is roughly horseshoe-shaped, and the northern half has only a few olive-groves to break the monotony of its surface, though there are many vineyards. The southern half is mountainous, rising to well over 2000 feet, while there are a considerable number of pines and other trees on this side. The lack of woods limits to a great extent the number of